

ABSTRACT

A white light source has a substrate with a blue light-emitting diode placed thereon and a phosphor mixture coated on the blue light-emitting diode and made of a red phosphor, a green phosphor and a yellow phosphor. The red phosphor can be CaS:Eu or SrS:Eu ; the green phosphor can be $\text{SrGa}_2\text{S}_4\text{:Eu}$ or $\text{Ca}_8\text{EuMnMg}(\text{SiO}_4)_4\text{C}_{12}$; and the yellow phosphor can be YAG:Ce or TbAG:Ce . The red phosphor, the green phosphor and the yellow phosphor emit, respectively, red light, green light and yellow light after receiving blue light from the blue light-emitting diode to mix a white light with a good color-rendering property.